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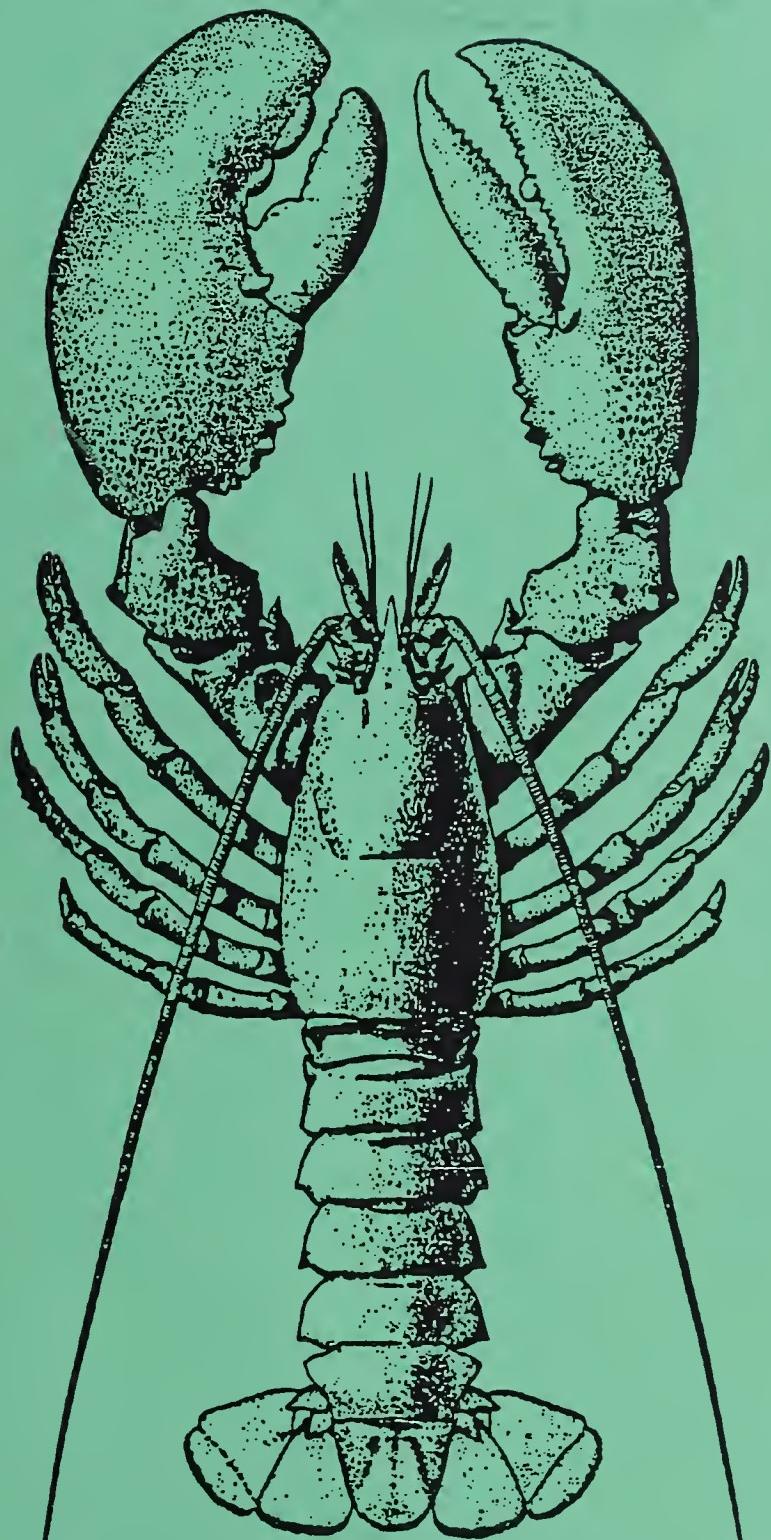
UMASS/AMHERST



1995

Massachusetts
Lobster Fishery
Statistics

Jonathan A. Pava
David C. McCarron
Thomas B. Hoopes



MASSACHUSETTS
DIVISION OF MARINE FISHERIES

**1995
MASSACHUSETTS
LOBSTER FISHERY
STATISTICS**

by
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Massachusetts Division of Marine Fisheries
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Technical Series 30



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**The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Trudy Coxe, Secretary**
Department of Fisheries, Wildlife and Environmental Law Enforcement
John C. Phillips, Commissioner
Division of Marine Fisheries
Philip G. Coates, Director

INTRODUCTION

The commercial lobster fishery of Massachusetts is the most economically important fishery conducted within the territorial waters of the Commonwealth. The overall importance of the fishery both in New England and, in recent years, the Mid-Atlantic states, has focused the attention of federal, regional and state fishery managers on this species. In the early 1970's, in an attempt to standardize management of the fishery, the federal and state governments developed an overall lobster fishery management plan under the auspices of the State-Federal Fisheries Management Program. However, with the passage of the Magnuson Fishery Conservation and Management Act in 1976, the New England Fisheries Management Council, in cooperation with the Mid-Atlantic Council, developed and implemented a management plan for the entire Atlantic Coast lobster fishery. The basis and success of any such plan is an accurate statistical database. The Commonwealth of Massachusetts, with funding from the National Marine Fisheries Service, has been collecting annual reports from licensed lobster fishermen since the early 1960's. In the past these data were used primarily for descriptive and informational purposes, and occasionally for management. With the more recent emphasis on Federal management, however, these data have provided the respective management agencies with the information they need to protect the interests of Massachusetts' lobstermen and ensure a productive fishery in the Commonwealth.

During the period 1975 - 1980, the number of coastal commercial lobster permits was limited by law to 1300, with an additional ten percent issued to proven hardship cases each year. In 1981, a statutory change mandated the establishment of a permanent waiting list from which 100 new permits were issued. Thirty special additional permits were also awarded to full-time commercial fishermen who met certain criteria. From 1982 to 1987, 80 list permits and 20 special additional permits were issued each year. In 1988, the issuance of new coastal permits was suspended. From 1988 to 1993, license transfers were allowed only within the immediate family, and if a license was allowed to expire, it was retired. In early 1993, a new regulation was promulgated by the DMF establishing broader eligibility criteria and new procedures for the transfer of Coastal Commercial Lobster Permits. As a result of these measures, the number of permits has declined from an all time high of 1,865 in 1988 to a more manageable 1,609 licenses today. The new system has also allowed for more orderly turnover in the industry. The new transfer procedures provide for transfer to employees (captains, deck hands, etc.) and persons on an established waiting list in addition to transfers within the immediate family. Only those licenses that have been actively fished for four out of the past five years according to catch reports filed with the Division may be transferred. The person to whom the permit is transferred must prove that he/she has at least one year of experience in the commercial lobster pot fishery or two years of experience in commercial fishing. All transferees must be owner/operators of the new business. Transfer activity for calendar year 1995 is described on Page 2.

This report is the twenty - ninth annual publication of data compiled from the catch reports of licensed lobster fishermen. Data were presented in a standardized format through 1979. In 1980, the presentation was enhanced as a result of improved collection and analysis methods. This publication represents the tenth year in which the data processing and analysis have been completely automated. Areal data presented in this report conform to the National Marine Fisheries Service statistical reporting areas. This report does not, however, cover the scope of the Project's existing database and computational capability. Requests for expanded information, or questions concerning this publication, should be directed to the Division's Statistics Project in Salem, MA: (508) 745-3113.

This report has been prepared by personnel of the Division of Marine Fisheries Information Systems and Fisheries Statistics Project, funded jointly by the Commonwealth and the National Marine Fisheries Service under the Interjurisdictional Fisheries Act (Public Law 99-659). The preparation of this report would not have been possible without the cooperation of licensed lobstermen who provided the information on their annual reports. Special thanks go to Ann Spires who continues, year after year, to interpret and keypunch, with special care and accuracy, the type of reports that fishermen are likely to fill out, and to Gerald Nash for his help in Oracle development and report generation. Thanks also go to Charlie Anderson, who heads up the project, for his help with system development and upgrades and for his suggestions concerning this publication. These three people are as important to this process as we are, and without them this publication would not be possible. The authors also wish to acknowledge the assistance of Bruce Estrella from our Lobster Biology Project and Eileen Feeney and Kevin Creighton from our permitting office.

SOURCE OF DATA

"No person may fish for or take lobster in coastal waters or land lobster in the Commonwealth without a permit issued by the Director of the Division of Marine Fisheries." (Chapter 130, Mass. G.L., Section 38). Chapter 130, Mass. G.L., Section 33, requires any person so licensed to file an annual report of their catch by January 31 for the preceding calendar year. In 1980, a dual reporting system was established. Commercial lobstermen (coastal, offshore and seasonal(student)) received a detailed catch report form with their license renewal application. This report requests the following information: method of fishing; number and type of gear used; effort data (set-over days, number of trips per month, etc.); pounds of lobster caught; areas fished; principal ports of landing; and information relative to the vessels and traps used in the fishery. Recreational fishermen are asked to report on their license renewal application form the number of lobsters taken during the previous year and the maximum number of traps fished. Project personnel sort, edit, tabulate and interpret data from all reports received. Data presented in this publication are based on catch reports actually received as of July 12, 1996 and are not expanded to represent all of the permits issued in 1995.

COASTAL LOBSTER LICENSE TRANSFER

During 1993, the Division promulgated regulations to broaden the criteria for the transfer of a coastal lobster license from one individual to another. The intent of the new legislation was to create more options for lobstermen who wish to retire and leave this limited entry fishery. During calendar year 1995, the Division authorized the transfer of 55 coastal lobster licenses. Twenty four of the transfers went to 'captains' who were previously authorized to fish another holder's license and who had fished that holder's license for at least twelve months prior to transfer. Seven transfers were allowed within the holder's immediate family (and would also have been allowed prior to the new regulation). Nine transfers were made directly from the holder to a sternman with a documented fishing history. Fifteen lobstermen advertised their coastal lobster businesses to persons on a waiting list maintained by the Division and subsequently transferred their permits. Sixteen licenses were forfeited to the Division in 1995; eight of these coastal lobster permits were issued directly to waiting list applicants, and the remaining eight licenses were permanently retired.

EXPLANATION OF TABLES

All data presented in this publication are broken down into two basic categories: the first is "territorial" which represents data pertaining to all lobstering activity taking place within the territorial waters (3 mile line) of the Commonwealth (Areas 1-14 on Figure 1A); the second is "non-territorial" which represents all data beyond those waters (Areas 15-25 on Figure 1B). In 1990, the statistical reporting map was revised to reflect the territorial / non-territorial breakdown and to conform to the National Marine Fisheries Service's statistical reporting areas. Figures 1A and 1B show the statistical reporting areas used by the Division to collect most commercial fisheries data in the Commonwealth.

Figure 1A. 1995 Massachusetts Lobster Fishery; Statistical Reporting Map Showing Territorial Waters and Outlying Areas

**Division of
Marine Fisheries**
DIRECTOR PHILIP COATES



Massachusetts
Geographic
Information
System

Massachusetts Executive Office of Environmental Affairs - 1995

Scale = 1:1,320,000

0 miles 10 20 30

Description of Boundaries for Territorial Areas

Between
Areas Boundaries

1 & 2	Castle Neck, Ipswich - Territorial Line
2 & 3	Gales Pt, Manchester - Territorial Line
3 & 4	Red Rock, Lynn - Territorial Line
4 & 5	Strawberry Pt, Cobasset - Territorial Line
5 & 6	High Pines Ledge, Plymouth - 120 Foot Line
6 & 7	Scusset Beach, Sandwich - 120 Foot Line
5, 6, 7 & 8	120 Foot Line
8 & 9	70 Degree Longitude Line
9 & 10	70 Degree Longitude Line
9 & 11	41 Degree 20 Minute Longitude Line
10 & 12	Wasque Pt, MV - Muskeget Island, Nantucket
10 & 13	Succonnesett Pt, Mashpee - Cape Pogue, MV

Between
Areas Boundaries

11 & 12	70 Degree Longitude Line
12 & 13	41 Degree 20 Minute Longitude Line
13 & 14	Elizabeth Islands and Sow & Pigs Reef to Territorial Line
14 & 15	70 Degree Longitude Line to Territorial Line

NOTE:
Parts of Area 10 (Nantucket Sound) are federal waters,
but are managed by DMF.

= Territorial Waters

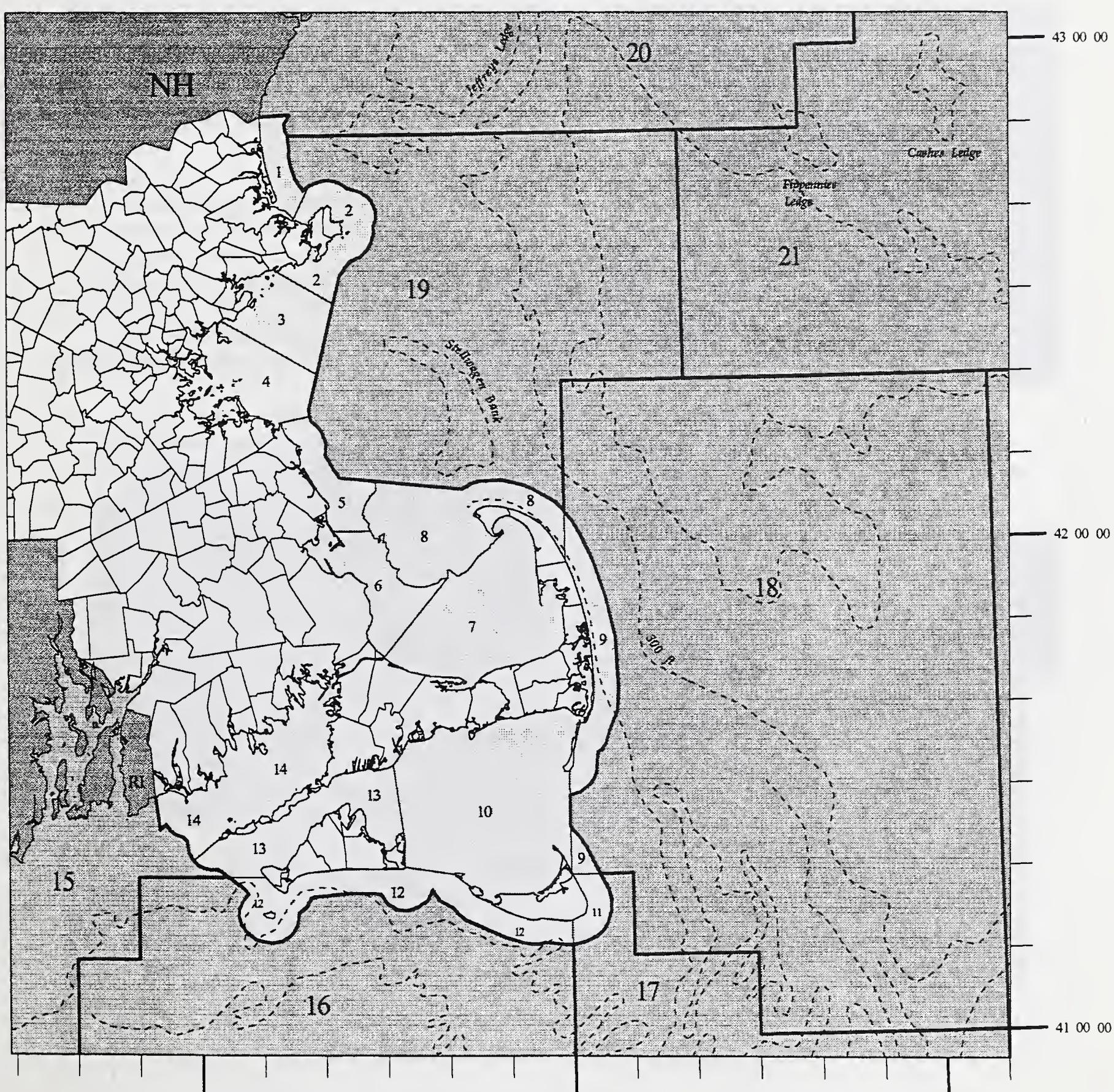


Figure 1B. 1995 Massachusetts Lobster Fishery; Statistical Reporting Map Showing Offshore Areas (which correspond to the National Marine Fisheries Service Statistical Areas)

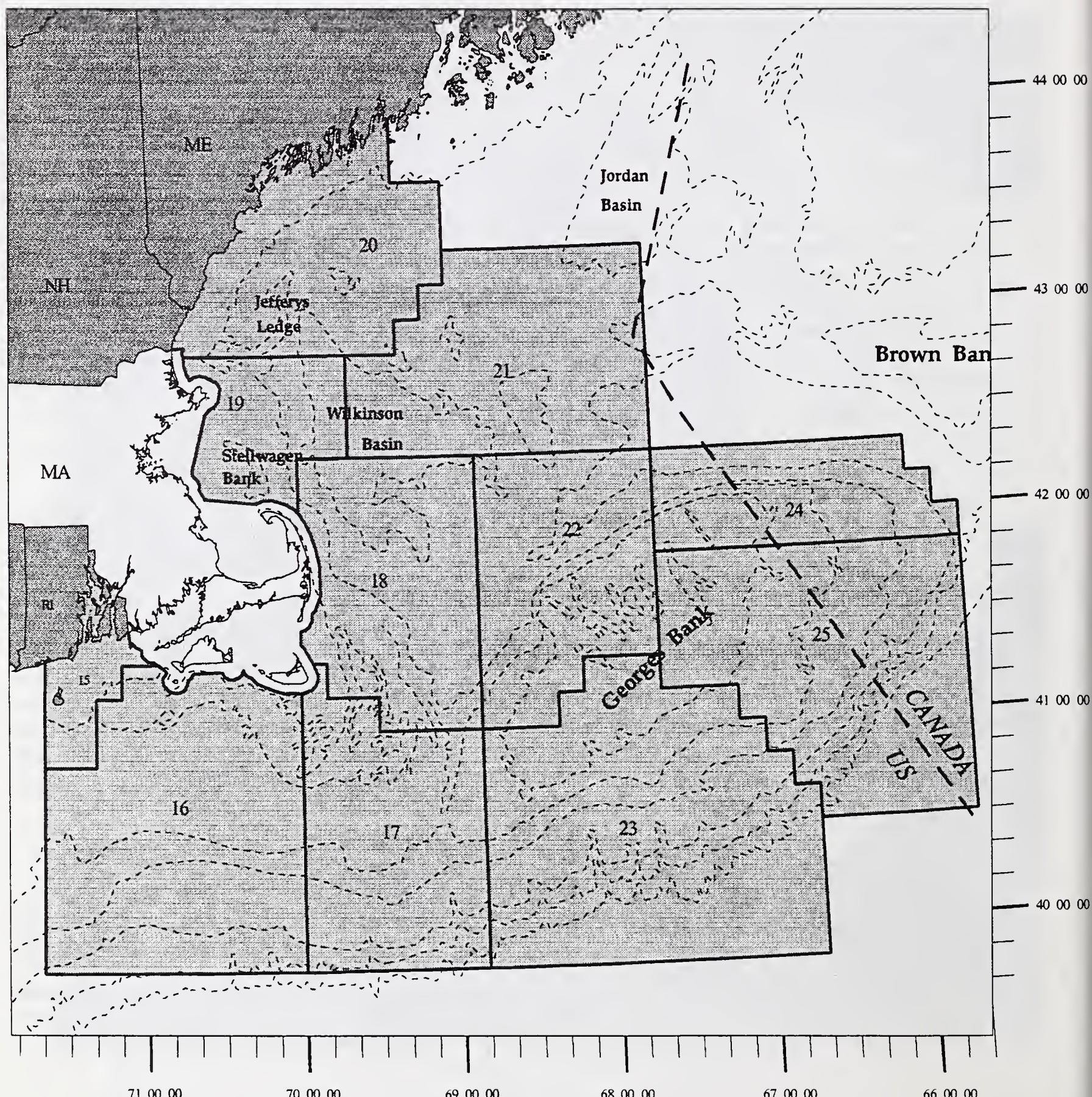
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Areas 15 through 25 are the same geographic areas as the National Marine Fisheries Service statistical areas except where the Massachusetts territorial line runs through them.

— — = Hague Line
□ = Territorial Waters



Here is a brief definition of each lobster license type:

Coastal Commercial: Allows the holder to harvest lobster anywhere, most importantly inside territorial waters.

Offshore Commercial: Allows the holder to harvest lobster outside territorial waters only.

Seasonal Commercial: Allows the holder, if he or she is a student, to harvest lobster anywhere, but with a maximum of 25 traps and only during the months of June - September.

Non-commercial: Allows the holder to harvest lobster anywhere using SCUBA gear, a maximum of 10 traps, or a combination of both. The catch may not be sold.

Regulations promulgated by the New England Fishery Management Council in cooperation with the major lobster harvesting states of the Atlantic Coast, declared 1990 the "off-year" of a 5-year program to increase the minimum legal size from 3 3/16 in 1987 to 3 5/16 inches by January of 1992 through four 1/32 inch increases. The program was suspended at the end of 1990 and the planned increases in 1991 and 1992 were delayed pending a study of the economic impact of the program. The gauge increase program has not resumed and has been superseded by a proposed amendment to the lobster Fishery Management Plan to control fishing effort without a gauge increase.

Tables presenting number of fishermen, number of pots fished, number and value of boats used in the fishery and total landings statewide, by county and license type, and for each city and town were prepared using the catch reports submitted by commercial fishermen. In keeping with Division policy, some of the data are masked or combined to protect the confidentiality of the individual submitting the report. Data referring to the number of fishermen, number and value of gear, and number and value of boats are presented by the home port of the licensee filing the report. Pounds of lobster harvested are presented by the port of landing reported by the fishermen.

Vessel and SCUBA gear values were calculated on the basis of the fishermen's estimate of its present value and the percentage of the time it is in use specifically for lobstering. Average values were used when the information was omitted from an individual report. When fishermen reported the number of lobsters taken, rather than poundage, a conversion factor of 1.28 pounds per lobster was used to calculate poundage figures. This figure is based on information collected by the Division's Coastal Lobster Investigations Project. For information on biological (average carapace length, sex ratios, percent of egg-bearing lobster in catch etc.) and other parameters (mortality, exploitation and catch per unit of effort rates) contact this Project in Sandwich, MA at (508) 888-1155.

Where tables refer to county, the reader is referred to Figure 10.

ISSUED LICENSES AND REPORTING STATUS

Table 1 lists the number of commercial and recreational licenses issued in 1995, the dollar value of fees collected and the number that reported catching lobster. There were 2,287 commercial lobster licenses issued during 1995: 1,609 coastal, 596 offshore and 82 seasonal. Non-commercial licenses issued totaled 11,486; a breakdown of their reporting status and landings can be found in Table 6.

As of July 12, 1996, a total of 84 licensed commercial lobstermen (3.7 percent) failed to file a catch report with the Division. Of the 2,203 commercial fishermen who reported, 532 or 24 percent claimed they did not catch any lobster during 1995. The number of coastal licenses issued continues to decline since a 1988 moratorium on the issuance of new licenses. An annual decrease of approximately one percent per year continued in 1995 driven by fishermen leaving the fishery and the Division's policy to retire half of these licenses through attrition.

The number of offshore licenses issued dropped approximately eight percent in 1995. Overall compliance with catch reporting by the offshore fleet appears to be improving. Student commercial licenses have increased in number by approximately 58 percent since 1991.

Table 1. 1995 Massachusetts Lobster Fishery; Reporting Status of Licenses Issued

<u>License Type (Fee)</u>	<u>Licenses Issued</u>	<u>Licensing Revenue</u>	Reported "Catching Lobster"		Reported "No Lobster Catch"		Not Reporting	
Coastal Commercial (\$ 260)	1,609	\$418,340	1,190	74%	403	25%	16	1%
Offshore Commercial (\$ 260)	596	\$154,960	439	74%	117	20%	40	7%
Seasonal (Student) Commercial (\$ 65)	82	\$5,330	42	51%	12	15%	28	34%
Non-Commercial (\$ 40)	11,486	\$459,440	7,098	62%	1,628	14%	2,760	24%
Total	13,773	\$1,038,070	8,769	64%	2,160	16%	2,844	21%

Table 2. Massachusetts Commercial Lobster Fishery; Selected Licensing Information, 1991 - 1995

	1991	1992	1993	1994	1995	Percent Five Year Change
Coastal Licenses						
Issued	1,682	1,647	1,627	1,612	1,609	-4.34%
% Change		-2.08	-1.21	-0.92	-0.19	
"Caught Lobster"	1,230	1,185	1,195	1,194	1,190	
% Change		-1.61	2.08	0.85	-0.15	
"Did Not Catch Lobster"	437	445	412	401	403	
% Change		3.99	-6.28	-1.76	0.69	
Not Reporting	15	17	20	17	16	
% Change		15.74	19.09	-14.21	-5.71	
Percent Not Reporting	0.9%	1.0%	1.2%	1.1%	1.0%	
Offshore Licenses						
Issued	717	710	711	648	596	-16.88%
% Change		-0.98	0.14	-8.86	-8.02	
"Caught Lobster"	439	439	479	480	439	
% Change		0.99	8.96	9.95	-0.56	
"Did Not Catch Lobster"	208	196	148	119	117	
% Change		-4.84	-24.60	-11.78	6.90	
Not Reporting	70	75	84	49	49	
% Change		8.20	11.84	-36.00	8.72	
Percent Not Reporting	9.8%	10.6%	11.8%	7.6%	8.2%	
Seasonal (Student) Licenses						
Issued	52	59	74	89	82	57.69%
% Change		13.46	25.42	20.27	-7.87	
"Caught Lobster"	29	29	44	49	42	
% Change		-11.86	51.72	11.36	-14.29	
"Did Not Catch Lobster"	8	9	8	15	12	
% Change		-0.85	-11.11	87.50	-20.00	
Not Reporting	15	19	22	25	28	
% Change		11.64	15.79	13.64	12.00	
Percent Not Reporting	28.8%	32.2%	29.7%	28.1%	34.1%	

Note: All annual percentage changes are normalized to the number of licenses issued for each license type in each year. Percent five year change is absolute.

LANDINGS AND VALUE

In 1995, 15,949,362 pounds of lobster were reported landed by commercial lobstermen in Massachusetts, a 1.39 percent decrease from 1994. Based on an average price of \$3.20 per pound, the commercial catch was valued at \$51,037,958, an 8.43 percent increase. Figure 2 shows the weighted ex-vessel price for 1995 as derived from audits of lobstermen's records. The weighted average price of \$3.20 reflects a 9.9 percent increase over the average ex-vessel price paid in 1994. (Weighted price means that each price is weighted by the number of pounds that were paid at that price instead of taking a flat average of all prices).

The coastal license holders reported landing 13,198,175 pounds, or 82.5 percent of the commercial catch, up 0.5 percent from 1994. Of the 15,949,362 pounds of lobster landed commercially, 10,040,721 were reported taken within the territorial waters of the Commonwealth. In total pounds of lobster landed, Essex County continues to be ranked first, Plymouth County second and Barnstable County third. See Table 3 for a breakdown of pounds landed and number of fishermen by license type and county and Table 4 for a five-year comparison of selected landings and effort statistics.

Gloucester was the number one port in total pounds landed followed by Plymouth, Marshfield and Boston in that order. In total numbers of active commercial fishermen, Essex County ranked first with 572, Plymouth County second with 323 and Bristol County third with 281. Among the cities and towns of the Commonwealth, Gloucester ranked first in active fishermen followed by New Bedford, Boston and Plymouth in that order. See Tables 3 and 5, (the shaded areas in Table 5 refer to the top 10 cities in at least one of the two categories: pounds landed and number of fishermen).

**Figure 2. 1995 Massachusetts Commercial Lobster Fishery
Weighted Ex-Vessel Price Derived from Audited Lobstermen's Records**

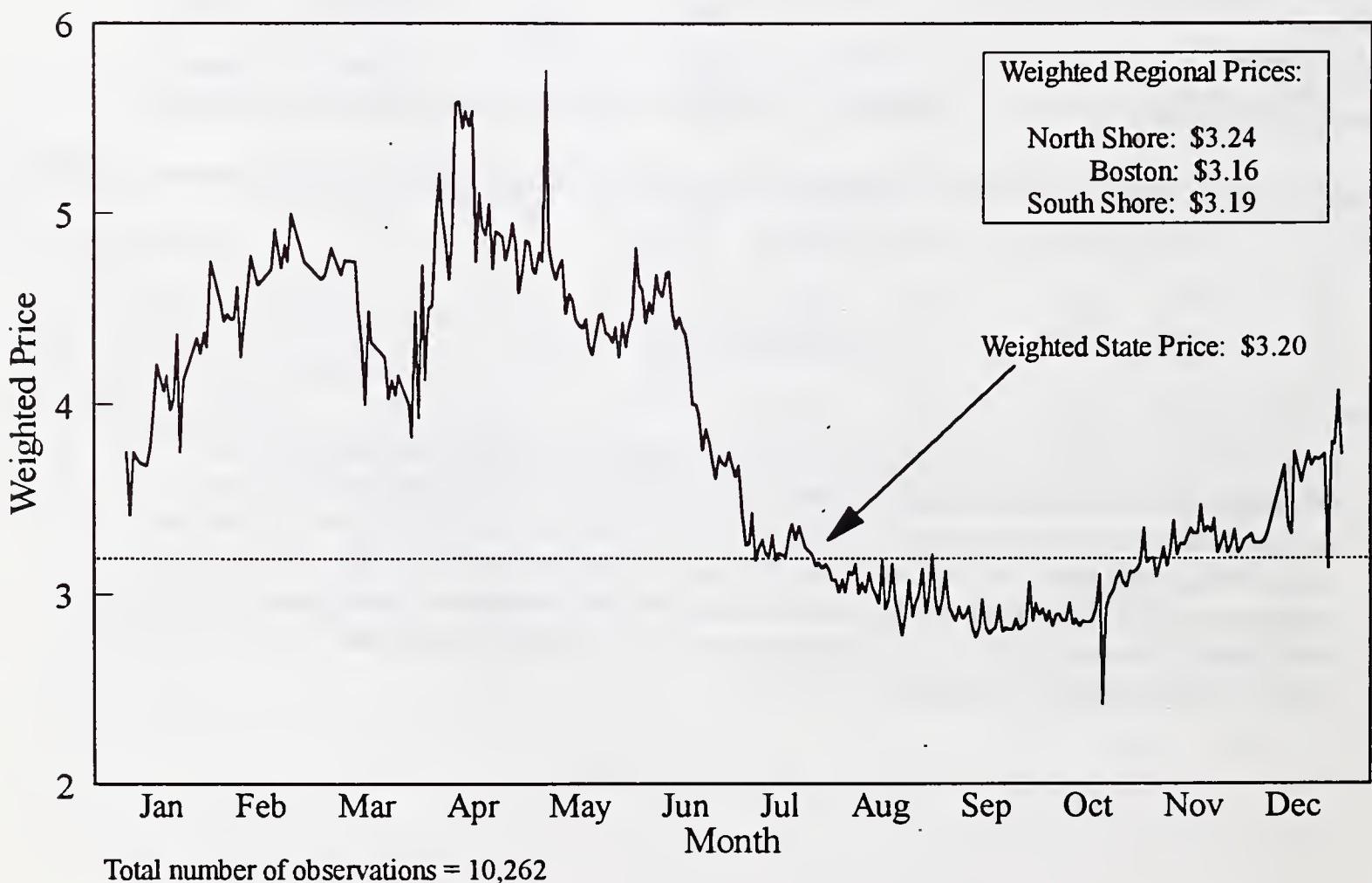


Table 3. 1995 Massachusetts Commercial Lobster Fishery; Number of Fishermen, Harvest (Lbs.) and Value of Harvest

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**Table 4. Massachusetts Commercial Lobster Fishery;
Selected Landings (Lbs.) and Effort Statistics, 1991-95**

	1991	1992	1993	1994	1995	Percent Five Year Change
Total Landings	15,986,991	14,967,260	14,425,864	16,174,818	15,949,362	-0.24
Percent Change		-6.38	-3.62	12.12	-1.39	
Total Traps Fished	485,924	477,836	467,180	488,945	482,180	-0.77
Percent Change		-1.66	-2.23	4.66	-1.38	
Total Value	\$43,644,485	\$44,602,435	\$41,979,264	\$47,068,720	\$51,037,958	16.94
Percent Change		2.19	-5.88	12.12	8.43	
TERRITORIAL (Inside 3 Miles)						
Landings	11,001,384	9,658,545	9,124,412	10,498,316	10,040,721	-8.73
Percent Change		-12.21	-5.53	15.06	-4.36	
Value	\$30,033,778	\$28,782,464	\$26,552,039	\$30,550,100	\$32,130,307	6.98
Percent Change		-4.17	-7.75	15.06	5.17	
Trap Landings	10,977,053	9,626,941	9,061,639	10,430,833	10,027,563	-8.65
		-12.30	-5.87	15.11	-3.87	
Traps Fished	397,951	376,901	361,213	365,821	358,075	-10.02
		-5.29	-4.16	1.28	-2.12	
Non-Trap Landings (Gillnet, Diver)	24,331	31,604	38,948	40,583	13,158	-45.92
		29.89	23.24	4.20	-67.58	
NON-TERRITORIAL (Outside 3 Miles)						
Landings	4,985,607	5,308,715	5,301,452	5,676,503	5,908,641	18.51
Percent Change		6.48	-0.14	7.07	4.09	
Value	\$13,610,707	\$15,819,971	\$15,427,225	\$16,518,624	\$18,907,651	38.92
Percent Change		16.23	-2.48	7.07	14.46	
Trap Landings	4,166,974	4,296,329	4,315,675	4,634,960	4,994,645	19.86
		3.10	0.45	7.40	7.76	
Traps Fished	87,973	100,935	105,967	123,124	124,106	41.07
		14.73	4.99	16.19	0.80	
Non-Trap Landings (Gillnet, Trawler)	818,633	1,012,387	985,168	1,041,542	913,996	11.65
		23.67	-2.69	5.72	-12.25	
Average Price (\$) / Pound	2.73	2.98	2.91	2.91	3.20	
Percent Change		9.16	-2.35	0.00	9.97	
Ave. Lbs. / Trap-Haul	0.7008	0.6309	0.6554	0.6976	0.7286	
Percent Change		-9.97	3.88	6.44	4.44	
Ave. Lbs. / Trap	31.17	29.14	28.63	30.81	31.15	
Percent Change		-6.50	-1.73	7.61	1.11	

Table 5. 1995 Massachusetts Commercial Lobster Fishery
Number of Active Commercial Fishermen and Landings by Homeport
 Does Not Include Seasonal Licenses

TOWN	FISHERMEN NUMBER	RANK	POUNDS TERRITORIAL	POUNDS NON- TERRITORIAL	TOTAL POUNDS	PERCENT	RANK
BARNSTABLE-YARMOUTH	12	24	61,634	344,817	406,451	2.57	15
BEVERLY	44	9	572,105	232,930	805,035	5.10	5
BOSTON	107	3	714,099	265,442	979,541	6.21	4
BOURNE	7	29	54,686	0	54,686	0.35	35
CHATHAM	44	9	120,735	201,878	322,613	2.04	18
CHILMARK	22	19	60,141	154,806	214,947	1.36	22
COHASSET	39	11	447,502	128,841	576,343	3.65	10
DANVERS	10	25	46,580	985	47,565	0.30	37
DARTMOUTH	10	25	23,602	6,123	29,725	0.19	43
DENNIS-BREWSTER	21	20	110,329	0	110,329	0.70	28
DUXBURY	10	25	86,814	0	86,814	0.55	30
ESSEX	4	31	5,009	0	5,009	0.03	47
FAIRHAVEN	44	9	181,144	560,330	741,474	4.70	7
FALMOUTH	15	23	36,114	20,240	56,354	0.36	34
GLoucester	213	1	1,023,352	1,270,456	2,293,808	14.53	1
HARWICH	6	30	9,808	90,429	100,237	0.63	29
HINGHAM	30	14	332,437	103,029	435,466	2.76	13
HULL	25	16	285,298	50,056	335,354	2.12	16
IPSWICH-ROWLEY	23	18	45,230	113	45,343	0.29	39
KINGSTON	4	31	40,436	0	40,436	0.26	40
LYNN	10	25	132,006	21,063	153,069	0.97	25
MANCHESTER	28	15	179,325	40,424	219,749	1.39	21
MARBLEHEAD	49	8	356,770	76,199	432,969	2.74	14
MARSHFIELD	78	5	786,411	327,440	1,113,851	7.06	3
MATTAPoisETT	10	25	69,766	11,478	81,244	0.51	31
NAHANT	23	18	251,392	20,830	272,222	1.72	19
NANTUCKET	8	28	13,970	39,661	53,631	0.34	36
NEW BEDFORD	183	2	143,702	482,115	625,817	3.96	8
NEWBURYPORT-NEWBURY	22	19	40,548	17,344	57,892	0.37	33
ORLEANS-EASTHAM	24	17	120,804	22,442	143,246	0.91	26
PLYMOUTH	94	4	1,166,797	72,825	1,239,622	7.85	2
PROVINCETOWN	36	12	187,127	24,335	211,462	1.34	23
QUINCY	9	26	26,408	7,360	33,768	0.21	42
REVERE	10	25	231,291	9,788	241,079	1.53	20
ROCKPORT	60	6	420,048	42,538	462,586	2.93	12
SALEM	9	26	3,940	0	3,940	0.02	48
SALISBURY	8	27	13,056	379	13,435	0.09	45
SANDWICH	40	10	502,718	292,215	794,933	5.04	6
SAUGUS	34	13	325,041	4,703	329,744	2.09	17
SCITUATE-NORWELL	59	7	304,731	241,878	546,609	3.46	11
SWAMPSCOTT	22	19	187,154	0	187,154	1.19	24
Tisbury-EDGARTOWN-OAK BLUFFS	17	21	13,679	59,388	73,067	0.46	32
TRURO	8	27	14,098	0	14,098	0.09	44
WAREHAM-MARION	9	26	36,078	630	36,708	0.23	41
WELLFLEET	6	30	42,306	4,348	46,654	0.30	38
WESTPORT-SWANSEA-FALL RIVER	44	9	108,947	470,454	579,401	3.67	9
WEYMOUTH	6	30	7,830	4,357	12,187	0.08	46
WINTHROP	16	22	118,511	0	118,511	0.75	27
STATEWIDE TOTAL	1,612		10,061,509	5,724,669	15,786,178	100.00	
OUTOFSTATE	17		8,055	138,091	146,146		

Shaded areas denote towns which rank in the top 10 for number of fishermen or total landings or both.

RECREATIONAL LOBSTER FISHERY

Recreational statistics are shown in Table 6. Licenses issued in 1995 totaled 11,486, up slightly from 1994, with 8,726 or 76 percent, reporting that they fished for lobster. In general, reporting rates dropped slightly and the percentage of license holders fishing decreased. Landings fell by about five percent from 1994. The number of traps fished in the recreational fishery has risen steadily for past few years. The number of hours dived has continued to decline from 1992 levels. Landings amounted to 364,718 pounds or only 2.3 percent of the commercial landings. The concern that recreational fishermen have a detrimental effect on the resource is often expressed by the commercial sector. These figures would suggest that this is probably not the case. It should be noted that those individuals who did not report, were not able to renew their recreational license for 1995. One quarter of the licenses in the recreational fishery have turned over in the past year; historically, this turn-over rate is not unusual.

Table 6. 1995 Massachusetts Recreational Lobster Fishery; License Status and Harvest Information

<u>License Type:</u>	Diver	Diver/Pot	Potman	Total	Percent
1) Number of Licenses Issued in 1995	4,116	3,286	4,084	11,486	
2) Number That Reported	2,872	2,695	3,159	8,726	75.97%
a) Total Number That Fished	2,291	2,177	2,630	7,098	61.80%
b) Total Number That Did Not Fish	581	518	529	1,628	14.17%
3) Number That Did Not Report	1,214	715	962	2,760	24.03%
					Percent Change from 1994
4) Number of Lobsters Reported Landed	41,089	81,314	162,533	284,936	
Pounds of Lobsters (Calculated)*	52,594	104,082	208,042	364,718	-5.09%
5) Number Pots Fished		7,523	19,967	27,490	5.45%
6) Number of Hours Diving	33,024	28,441		61,465	-13.27%

* Based on 1.28 Pounds per Lobster.

TERRITORIAL FISHERY

Territorial landings by commercial fishermen were concentrated in the months of July through November when 84 percent of the yearly harvest was landed. A typical yearly scenario is for catches to increase sometime in mid to late July and peak in August and September. Water temperatures rise during this time inducing growth and subsequent recruitment of previously sub-legal lobsters into the legal size category. The 1995 landings were more evenly distributed during July thru November, whereas landings in 1994 were heavily concentrated in October. See Table 7 and Figure 3.

The greatest harvest of lobster from territorial waters was from the Boston Harbor vicinity (including the outlying areas which comprise Area 4 on Figure 1A), where approximately 28% of the state's territorial harvest was caught. This far outweighs any of the other designated areas in terms of landings.

Table 7. 1995 Massachusetts Commercial Lobster Fishery
Percent Monthly Territorial Harvest by License Type

Month	Coastal	Seasonal
January	0.81	0.00
February	0.27	0.00
March	0.61	0.00
April	1.76	0.00
May	2.64	0.00
June	5.98	14.93
July	14.11	36.15
August	19.13	34.79
September	18.09	14.14
October	18.99	0.00
November	13.23	0.00
December	4.39	0.00
Total	100.00	100.00

Figure 3. 1995 Massachusetts Commercial Lobster Fishery
Total Monthly Territorial Harvest for Coastal and Seasonal License Types

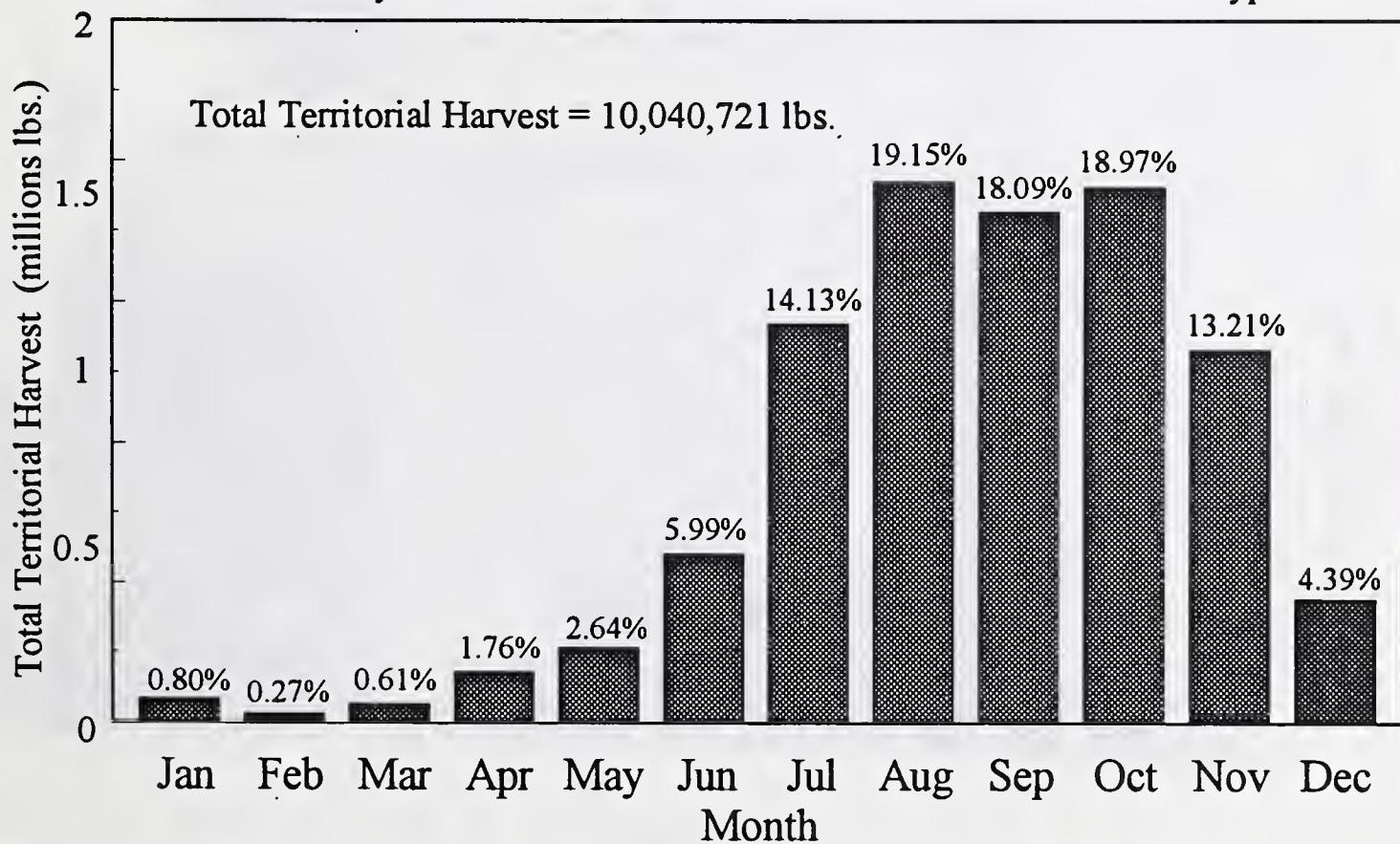


Table 8. 1995 Massachusetts Commercial Lobster Fishery
Percent Territorial Harvest by Area Fished by License Type

Area Fished	Coastal	Seasonal
1	1.32	3.40
2	14.07	27.43
3	11.92	4.17
4	27.94	12.40
5	10.39	5.44
6	8.77	2.78
7	6.87	15.16
8	8.80	0.68
9	2.56	6.54
10	0.26	16.97
11	0.00	0.00
12	0.93	0.00
13	1.83	0.00
14	4.35	5.05
Total Pounds	10,030,426	10,295

Territorial landings were down 3.5 percent in 1995. Although many areas including Boston Harbor saw notable decreases in their percentage share of territorial landings, a few areas, including Cape Cod Bay and Buzzards Bay, did show overall increases for the year. See Figure 1A for the map of fishing areas and Figure 4 and Table 8 for a complete breakdown by area for each license type and month.

Offshore license landings are not shown in Figures 3 and 4 because license holders of this type cannot harvest lobsters within territorial waters. Offshore landings are more evenly distributed during the year with offshore potmen landings peaking in autumn and mobile gear landings peaking in the winter months. Figure 5 shows the distribution of all lobster landings by statistical reporting area.

Figure 4. 1995 Massachusetts Commercial Lobster Fishery
Total Territorial Harvest for Coastal and Seasonal License Types by Area Fished

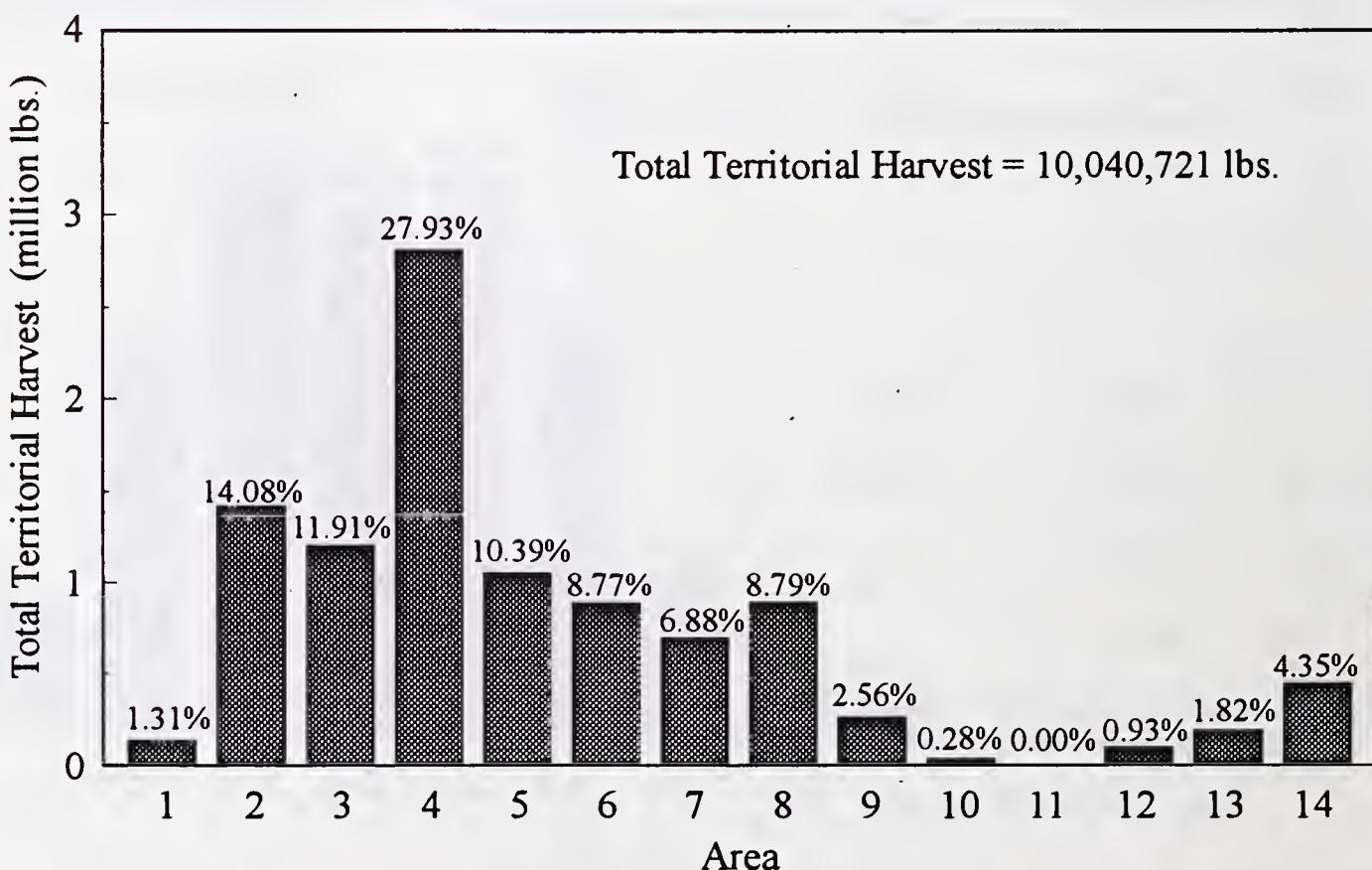
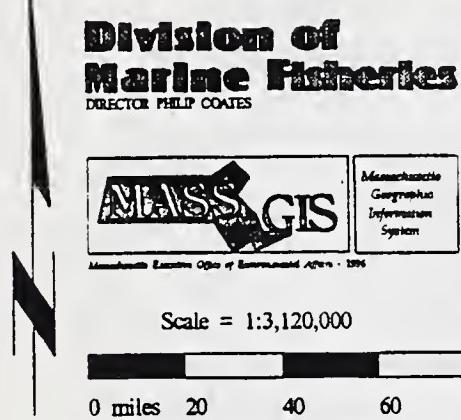
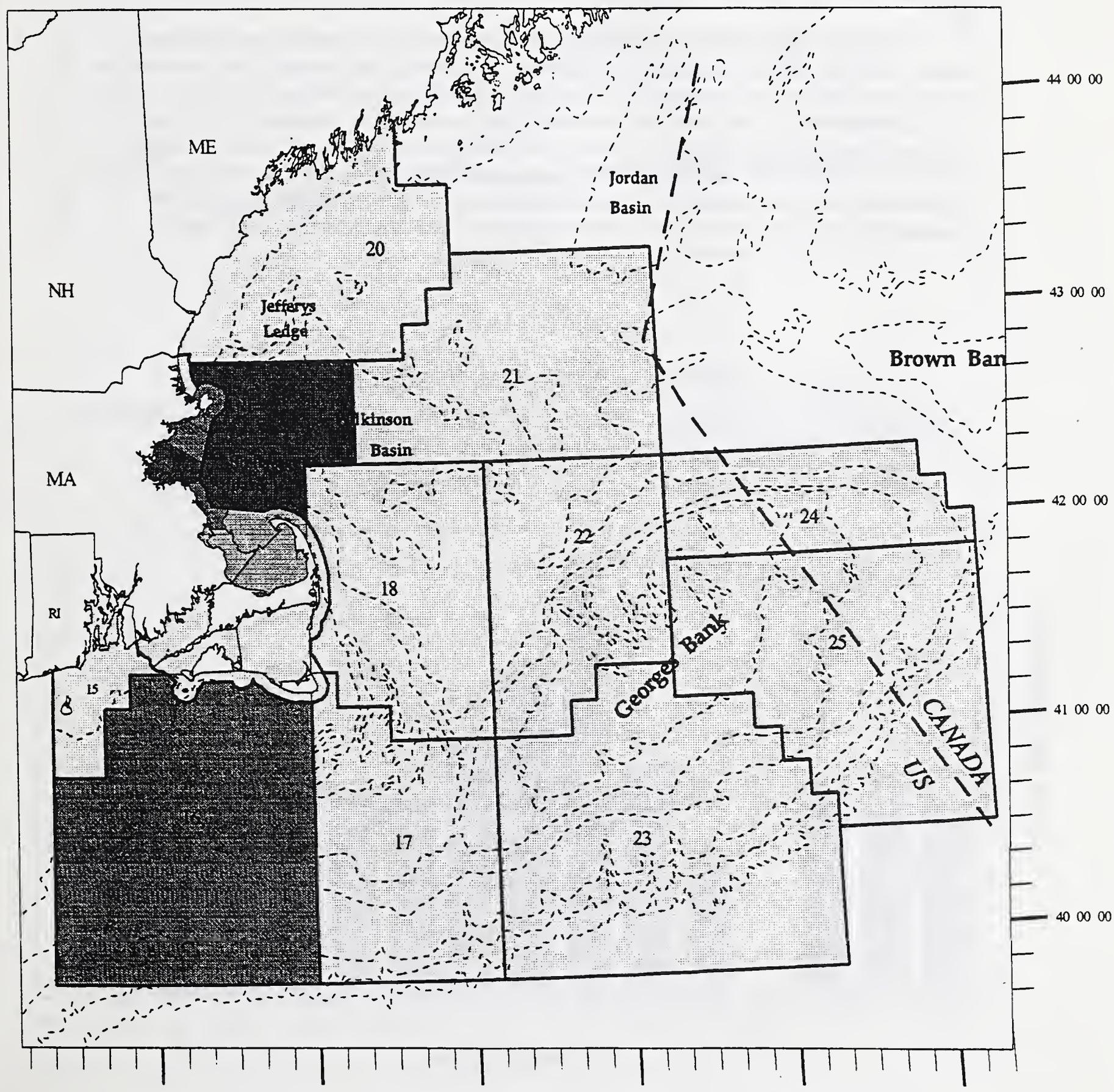


Figure 5. 1995 Massachusetts Lobster Fishery; Landings by Statistical Reporting Area - (See Figures 1A & 1B for Reference to Reporting Areas)



LEGEND

□	1 - 500,000 LBS (N = 15)
▨	500,001 - 1,000,000 LBS (N = 4)
▨	1,000,001 - 2,000,000 LBS (N = 4)
▨	2,000,001 - 3,000,000 LBS (N = 2)
■	3,000,001 - 4,000,000 LBS (N = 0)



CATCH RATES

The average catch per trap haul for coastal lobstermen was .6854 pounds, an increase from 1994. For traps fished one set-over day the average was, .3616; for those fished two days, .6465; for three days, .6658; and for four days, .7662. See Figure 6 for catch effort by set-over day.

Figures 7 and 8 show the average catch per trap-haul - set-over day for area fished and month, where set-over day is factored into the effort. The average catch per trap haul - set-over day for 1995 was .1916, a slight increase from 1994 and a fourteen percent decrease from 1991. Overall these figures should be categorized as "estimates" since, in many cases, fishermen will estimate the number of traps hauled per trip for each month. If a fisherman leaves this information blank, the catch report is returned for corrections. If the combination of maximum traps, set-over days, average traps hauled per trip and number of trips per month is out of range for a particular month, the information is interpolated by Division statistics personnel and then factored into the analysis.

Figure 6.. 1995 Massachusetts Commercial Lobster Fishery
Catch per Unit of Effort by Set-Over Day for Coastal Potmen and All Potmen

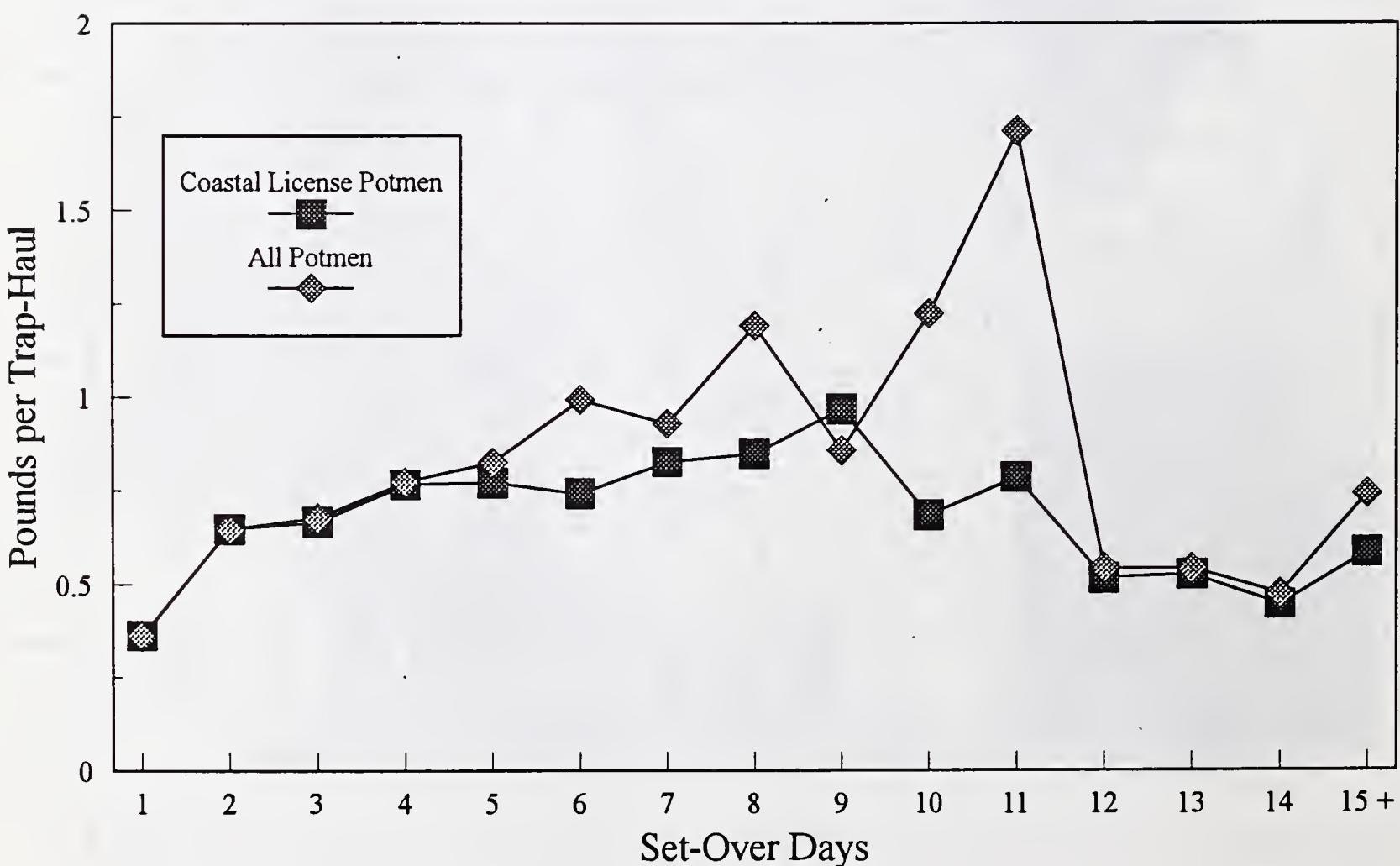


Figure 7. 1995 Massachusetts Commercial Lobster Fishery
Catch per Unit of Effort for Coastal and All Potmen by Month

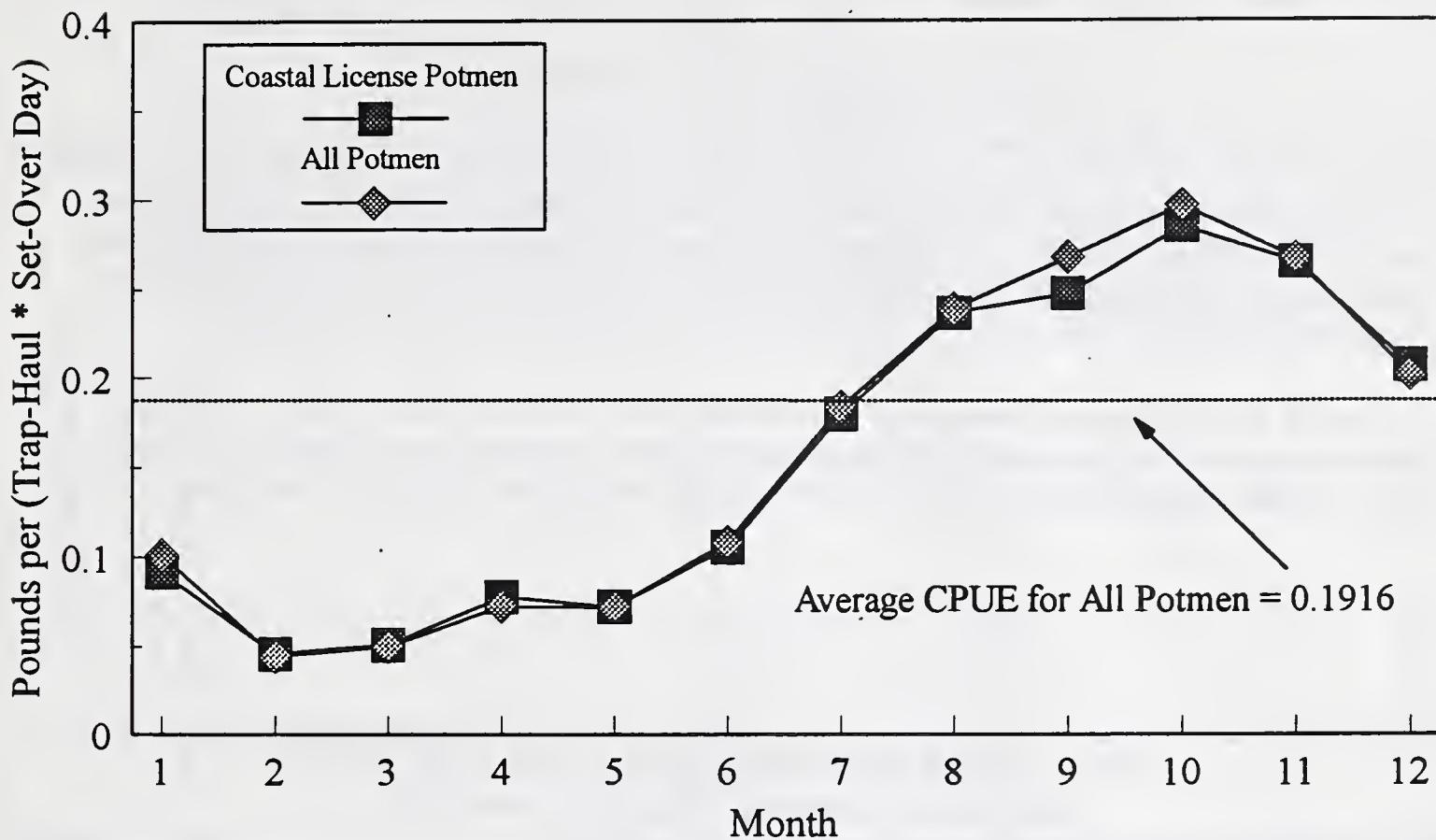
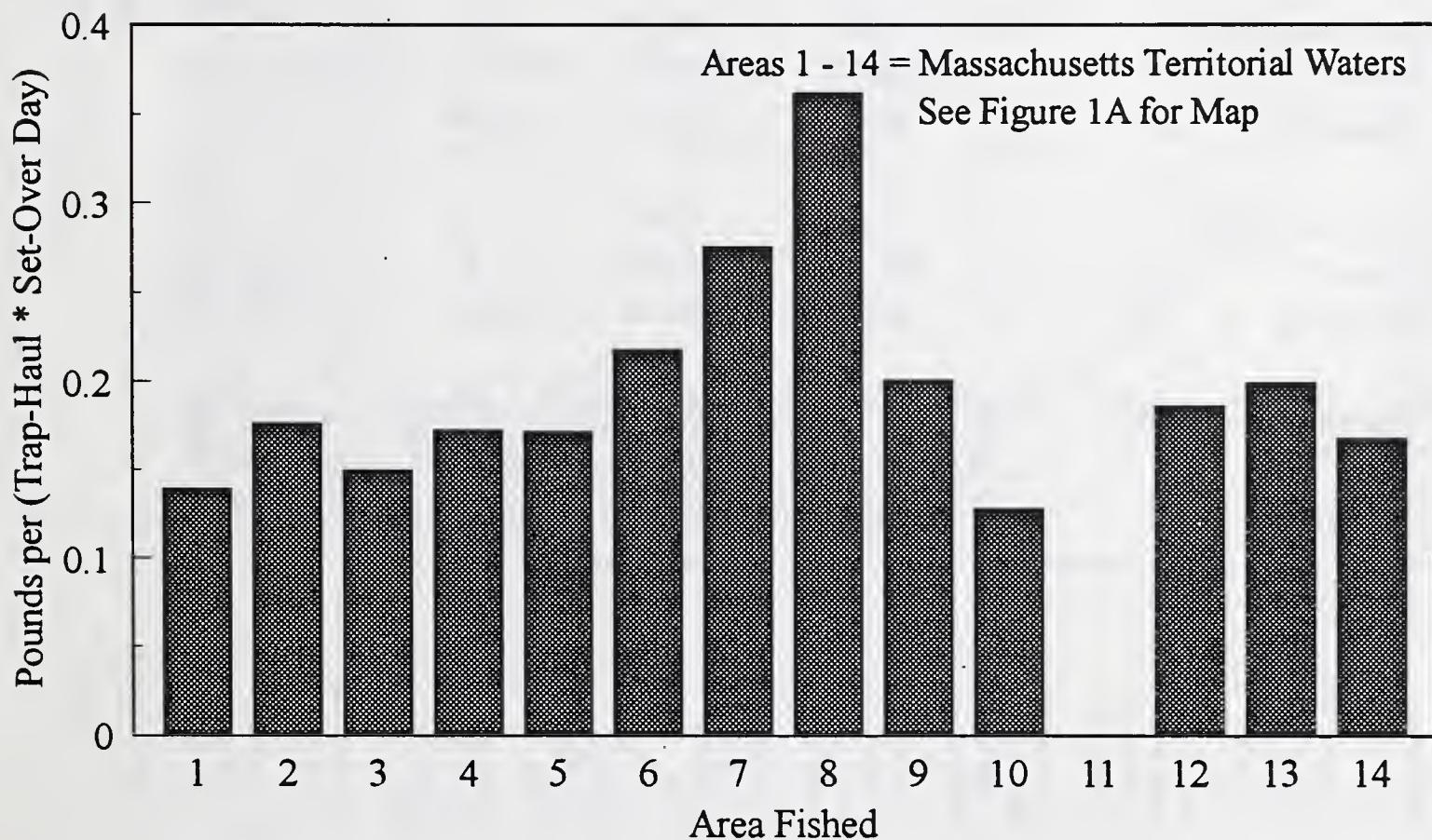


Figure 8. 1995 Massachusetts Commercial Lobster Fishery
Catch per Unit of Effort for All License Types by Area Fished



FISHING GEAR, VESSELS AND VALUE

In the commercial fishery, traps were valued at \$25,494,437, diving gear at \$36,175, and power and non-power boats at \$49,041,197 yielding a total gear value of \$74,571,809. Combined with the ex-vessel value of lobster sold, \$51,037,958, this gives a total fishery value of \$125,609,767. See Tables 9, 10 and 11.

Overall, 80% of the traps fished in the commercial fishery were wire framed, with 19% being wooden framed and approximately 1% categorized as "other". Average value (including warp and buoy) ranged anywhere from \$22.66 to \$100.46, with an average value of \$52.92. See Table 9.

**Table 9. 1995 Massachusetts Commercial Lobster Fishery
Trap Types Fished and Value by License Type**

	Coastal	Offshore	Seasonal	Total	Percent of Total
				Trap Type	
Wooden Framed Traps	78,570	13,199	96	91,865	19.07%
Value	\$3,862,153	\$1,279,059	\$3,360	\$5,144,572	
Value/Trap	\$49.16	\$96.91	\$34.88	\$56.00	
Wire Framed Traps	349,483	34,544	762	384,789	79.87%
Value	\$17,450,000	\$2,672,249	\$28,976	\$20,151,225	
Value/Trap	\$49.93	\$77.36	\$38.04	\$52.37	
Other Trap Types	4,035	1,067	0	5,102	1.06%
Value	\$91,450	\$107,190	\$0	\$198,640	
Value/Trap	\$22.66	\$100.46	\$0.00	\$38.93	
Total for License Type	432,088	48,810	858	481,756	
Value	\$21,403,603	\$4,058,498	\$32,336	\$25,494,437	
Value/Trap	\$49.54	\$83.15	\$37.69	\$52.92	

Value of trap includes warp and buoy. These figures include out-of-state fishermen.

Table 10. 1995 Massachusetts Commercial Lobster Fishery; Number of Fishing Vessels and Pots Fished

AREA:	LICENSE TYPE: GEAR TYPE:	TERRITORIAL (Areas 1-14)			NON-TERRITORIAL (Areas 15 - 25)			GRAND TOTAL
		Diver	Potman	COASTAL — Potman/ Diver	Trawl/ Gillnet	Potman	COASTAL — Trawl/ Gillnet	
- COUNTY -								
BARNSTABLE	Pots Fished	0	39,627	2,639	0	325	10,059	0
	Power Boat	5	137	15	0	16	19	2
	Non Power Boat	1	27	4	0	0	9	0
BRISTOL	Pots Fished	0	17,379	0	0	25	17,404	10,215
	Power Boat	0	70	0	1	72	15	0
	Non Power Boat	0	3	0	0	3	0	0
DUKES	Pots Fished	0	2,519	40	0	0	3,189	15,392
	Power Boat	0	24	1	0	25	14	16
	Non Power Boat	0	1	0	0	1	1	0
ESSEX	Pots Fished	0	131,524	1,421	0	249	133,194	26,110
	Power Boat	1	427	7	2	12	449	42
	Non Power Boat	0	97	2	0	1	100	4
NANTUCKET	Pots Fished	0	685	0	0	80	765	933
	Power Boat	0	8	0	0	4	12	1
	Non Power Boat	0	1	0	0	0	1	0
NORFOLK	Pots Fished	0	16,406	600	0	31	17,037	3,273
	Power Boat	0	48	1	0	2	51	4
	Non Power Boat	0	17	1	0	0	18	2
PLYMOUTH	Pots Fished	0	98,369	915	0	123	99,407	18,232
	Power Boat	2	294	9	3	6	314	29
	Non Power Boat	0	54	1	1	2	58	6
SUFFOLK	Pots Fished	0	42,318	0	0	25	42,343	4,792
	Power Boat	0	90	0	0	1	91	4
	Non Power Boat	0	8	0	0	0	8	0
STATE TOTAL	Pots Fished	0	348,927	5,615	0	859	355,325	76,863
	Power Boat	8	1,098	32	6	42	1,187	128
	Non Power Boat	1	208	8	1	3	221	22
OUT OF STATE	Pots Fished	0	250	0	0	0	250	0
	Power Boat	0	2	0	0	0	2	0
	Non Power Boat	0	0	0	0	0	0	0

Table 11. 1995 Massachusetts Commercial Lobster Fishery; Value of Fishing Vessels and Diving Gear

AREA:	TERRITORIAL (Areas 1-14)						NON-TERRITORIAL (Areas 15 - 25)					
	LICENSE TYPE:	COASTAL		SEASONAL (Student) Potman		TOTAL TERRITORIAL	COASTAL		OFFSHORE -- Trawl/ Gillnet		TOTAL NON- TERRITORIAL	GRAND TOTAL
GEAR TYPE:	Diver	Potman	Potman/ Diver	Trawl/ Gillnet	Potman	TERRITORIAL	Potman	Potman	Trawl/ Gillnet	Potman	Trawl/ Gillnet	
- COUNTY -												
BARNSTABLE												
Diving Gear	6,940	0	17,331	0	60,370	24,271	0	0	0	0	0	24,271
Power Boat	25,750	3,171,867	588,825	0	0	3,846,812	897,275	0	1,577,000	153,643	2,627,918	6,474,730
Non Power Boat	49	5,693	960	0	0	6,702	6,615	0	2,040	0	8,655	15,357
BRISTOL												
Diving Gear	0	0	0	0	0	0	0	0	0	0	0	0
Power Boat	0	1,792,450	0	2,500	1,600	1,796,550	1,031,000	2,000	2,240,450	720,680	3,994,130	5,790,680
Non Power Boat	0	300	0	0	0	300	0	0	0	0	0	300
DUKES												
Diving Gear	0	0	1,000	0	0	0	1,000	0	0	0	0	1,000
Power Boat	0	504,750	2,000	0	0	506,750	436,075	0	191,800	2,000	629,875	1,136,625
Non Power Boat	0	100	0	0	0	100	300	0	0	0	300	400
ESSEX												
Diving Gear	2,000	0	2,545	0	0	0	4,545	0	0	0	0	4,545
Power Boat	22,000	11,484,414	118,900	75,000	22,360	11,722,674	2,478,250	69,800	897,000	878,170	4,323,220	16,045,894
Non Power Boat	0	43,983	1,070	0	180	45,233	1,530	30	0	0	1,560	46,793
NANTUCKET												
Diving Gear	0	0	0	0	0	0	0	0	0	0	0	0
Power Boat	0	41,100	0	0	0	9,900	51,000	65,000	0	0	13,500	78,500
Non Power Boat	0	50	0	0	0	50	0	0	0	0	0	50
NORFOLK												
Diving Gear	0	0	12	0	0	0	12	0	0	0	0	12
Power Boat	0	1,532,700	50,000	0	4,625	1,587,325	382,500	0	50,000	0	432,500	2,019,825
Non Power Boat	0	5,701	475	0	0	6,176	1,250	0	0	0	1,250	7,426
PLYMOUTH												
Diving Gear	3,900	0	2,447	0	0	0	6,347	0	0	0	0	6,347
Power Boat	83,000	7,710,297	285,200	37,000	10,100	8,125,597	1,050,590	34,500	189,250	99,950	1,374,290	9,499,887
Non Power Boat	0	27,934	25	200	100	28,259	2,430	0	450	0	2,880	31,139
SUFFOLK												
Diving Gear	0	0	0	0	0	0	0	0	0	0	0	0
Power Boat	0	3,423,815	0	0	2,000	3,425,815	478,500	0	1,804,450	1,150,850	3,433,800	6,859,615
Non Power Boat	0	1,776	0	0	0	1,776	0	0	0	0	0	1,776
STATE TOTAL												
Diving Gear	12,840	0	23,335	0	0	0	36,175	0	0	0	0	36,175
Power Boat	13,0750	29,661,393	1,044,925	114,500	110,955	31,062,523	6,819,190	106,300	6,949,950	3,018,793	16,894,233	47,956,756
Non Power Boat	49	85,537	2,530	200	280	88,596	12,125	30	2,490	0	950,500	14,645
OUT OF STATE												
Diving Gear	0	0	0	0	0	0	0	0	0	0	0	0
Power Boat	0	30,500	0	0	0	30,500	0	0	0	0	950,500	981,000
Non Power Boat	0	0	0	200	0	200	0	0	0	0	0	200

VALIDITY OF DATA

Each year 150 coastal license holders are selected for audit and asked to submit the records they used to complete the harvest portion of their catch report. The Division does this to help estimate the amount of error involved in the reporting process. Selection is done randomly except when fishermen fail an audit. In these cases, they are audited again the following year. The audit was first instituted in 1977 for the 1976 catch reports. Over the last five years the lobstermen selected for audit reported landing 6,980,612 pounds. The audit of their records revealed a harvest of 6,996,373 pounds or a difference of -0.23 percent.

Last year the fishermen selected for audit reported harvesting 1,783,584 pounds of lobster on their 1995 catch reports. The audit of actual records showed total landings of 1,774,626 pounds, a difference of 8,958 pounds or 0.5 percent. Eight of the randomly selected fishermen have yet to respond to the audit request. Figure 9 shows the distribution of the percent difference between the selected fishermen's reported catch and their audited records. In general, reported landings are very well documented by dealer receipts and/or personal records, especially by the so-called "high-liners" in the fishery. Most of the lobstermen have had licenses for several years and know what is required in terms of reporting their fishing activities and have been informed of the value of accurate reporting in the development of management plans. They also know that their reported information is kept strictly confidential and published only in aggregate form. These factors all contribute to a conscientious and responsible reporting constituency.

Figure 9. Massachusetts Commercial Lobster Fishery
Frequency Distribution of the Percent Difference Between
Fishermen's Reported Catch and Their Audited Records

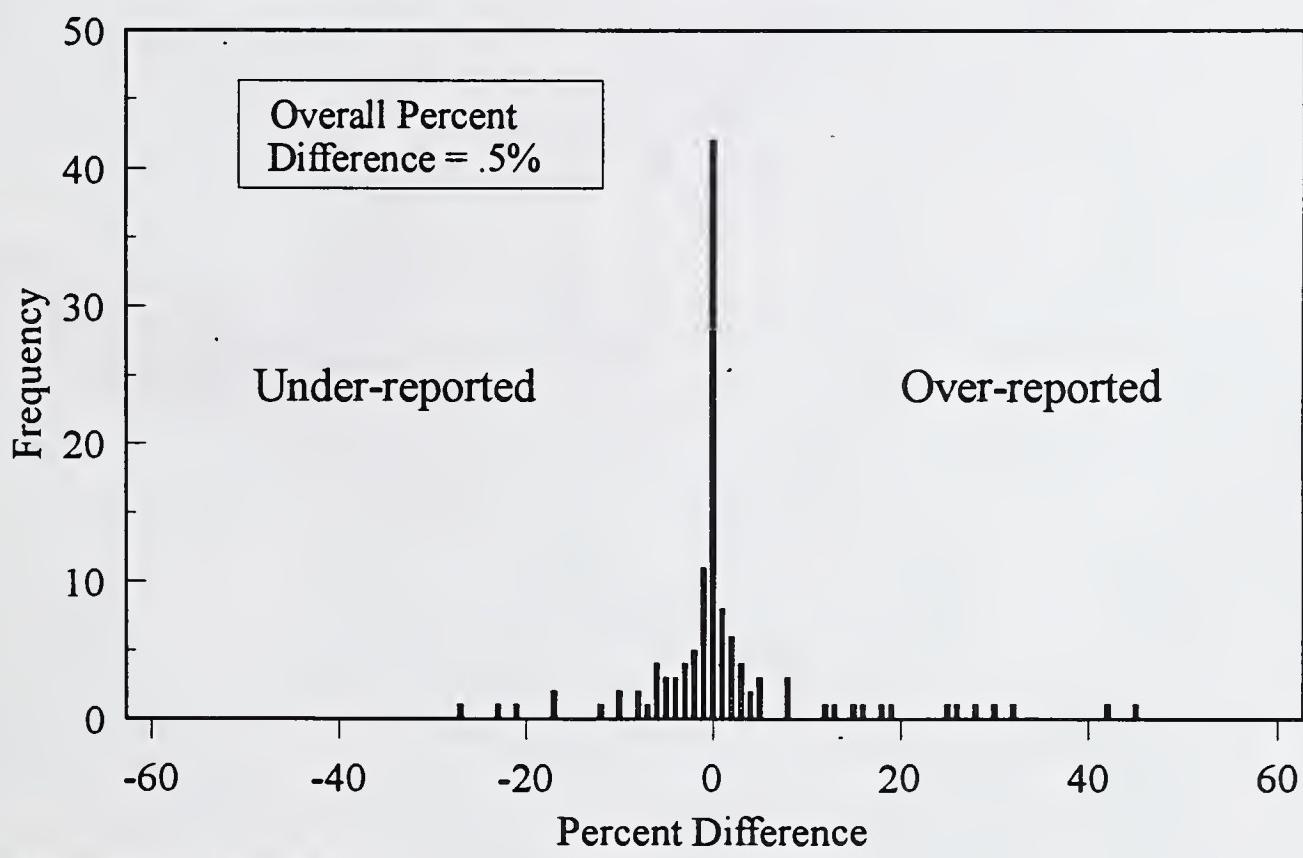
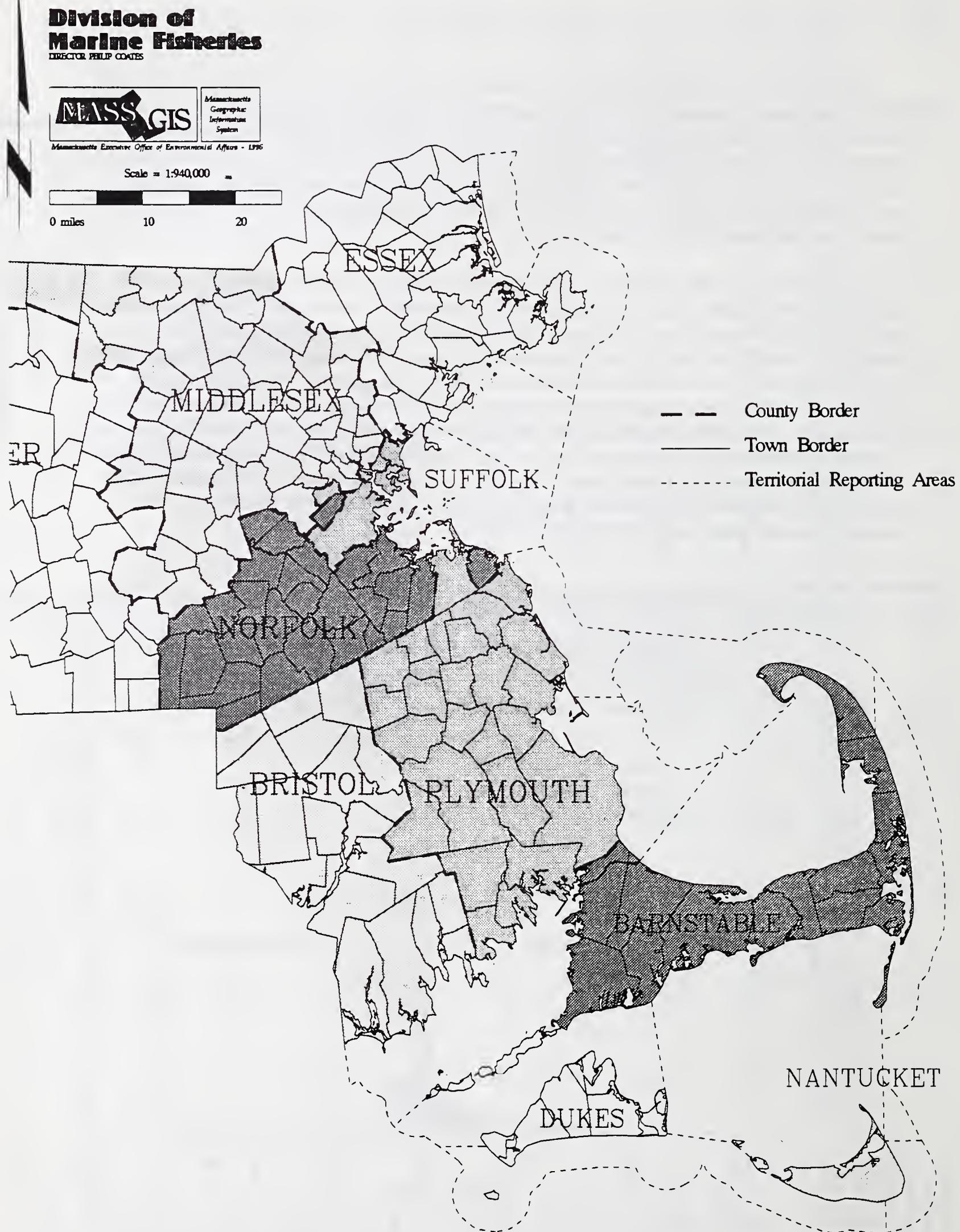


Figure 10. Coastal Map of Massachusetts Showing County Boundaries



DIVISION OF MARINE FISHERIES
CAT COVE LANDING LAUNDRY
92 Fort Avenue
Salem, MA 01970

Adams, Leonard
Government Documents Collection
University Library
University of Massachusetts
Amherst, MA 01003



